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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,625	11/20/2001	Donald S. Jackson	8350.0534-00	8757

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Finnegan, Henderson, Farabow,
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Washington, DC 20005-3315

EXAMINER

KYLE, MICHAEL J

ART UNIT	PAPER NUMBER
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3676

DATE MAILED: 11/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/988,625

Applicant(s)

JACKSON, DONALD S.

Examiner

Michael J Kyle

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-9 and 11-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-9,11-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4-9, and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albertson (U.S. Patent No. 6,290,235). Albertson discloses a main body (140) defining an opening (figure 6) with inner and outer surfaces, a first radial face (right axial side of 140 in figure 6), a second radial face (left axial side of 140 in figure 6) having a groove (164) disposed therein, defining an inner (166) and outer (168) lips. Albertson also discloses a relief feature (180) on the outer surface of the main body (140). The relief feature includes a channel (shown in figure 6) in the outer surface and extends from the first radial surface to a recess (end portion of 180, with the angled bottom surface, leftmost portion of the channel in figure 6) disposed in the outer lip of the main body. A ridge (170) separates the recess from the second radial face. The recess is adapted to receive a pressurized fluid from the first radial face through the channel, and the outer lip (168) is adapted to flex to allow a flow of pressurized fluid from the first radial face to the second radial face when the pressure of the fluid at the first radial face is greater than the pressure of a fluid at the second radial face (column 11, lines 1-51). Examiner considers the end portion of channel 180 on outer lip 168 as being distinguishable from the channel because it is structurally different from the rest of the channel in that the depth is not constant. This is the

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portion the examiner considers to be the recess. Albertson fails to disclose the channel to be circular.

3. However, applicant has not provided any criticality for the shape of the recess to be circular. In fact, applicant suggests the recess can be “a variety of other shapes, such as, for example, a square, an oval, an ellipse, or a triangle” (applicant’s specification, page 5, paragraph [22]). There appears to be no new result or advantage provided by replacing the square recess of Albertson with a circular recess, as claimed by applicant. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to change the shape of Albertson’s recess from square to circular as a choice of design. Such a change produces no new or unexpected result and is not considered novel.

4. With respect to claims 4-6, Albertson discloses a second channel (184, bottom of 140 in figures 5 and 7) extending along the first radial face and connecting with the channel in the outer surface. There is a plurality of relief features (180, figure 6), and the main body (140) has a substantially circular shape.

5. With respect to claim 7, Albertson discloses a housing (14), a cylinder rod (26), a seal (140) having a main body including inner and outer surfaces, first and second radial faces, and a groove, as discussed in the rejection of claim 1. The groove defines inner and (166) and outer lips (168), the inner lip engaging the cylinder rod. Albertson also discloses a relief feature (180) as discussed above, including a channel, a recess, and a ridge. Albertson fails to disclose the recess to be circular.

6. However, applicant has not provided any criticality for the shape of the recess to be circular. In fact, applicant suggests the recess can be “a variety of other shapes, such as, for

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example, a square, an oval, an ellipse, or a triangle” (applicant’s specification, page 5, paragraph [22]). There appears to be no new result or advantage provided by replacing the square recess of Albertson with a circular recess, as claimed by applicant. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to change the shape of Albertson’s recess from square to circular as a choice of design. Such a change produces no new or unexpected result and is not considered novel.

7. With respect to claim 8, Albertson discloses a second seal (40) engaging the cylinder (26) between the inner lip of the first seal and a chamber, and a third seal (142) engaging the cylinder at a location where the first and second seal engage a surface of the cylinder between the chamber and the third seal.

8. With respect to claim 9, Albertson discloses a first annular groove (202b) receiving the first seal (140), a second annular groove (202a) receiving the second seal (40), and a third groove (202c) receiving the third seal (142).

9. With respect to claims 10 and 12, Albertson discloses the relief feature (180) to include a channel (182) formed in the outer surface extending from the first radial face to a recess, and a second channel (184) extending along the first radial face.

10. With respect to claims 13 and 14, Albertson discloses a plurality of relief features (180, figure 6) and the main body has a circular shape.

11. With respect to claims 15 and 16, Albertson discloses the second seal to be a buffer seal (“buffer ring 40”, column 11, line 68) and the third seal is a wiper seal (“wiper 142” column 11, line 63).

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12. Claim 1, 4-9, and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albertson in view of Oliver (U.S. Patent No. 2,054,863). Albertson discloses a main body (140) defining an opening (figure 6) with inner and outer surfaces, a first radial face (right axial side of 140 in figure 6), a second radial face (left axial side of 140 in figure 6) having a groove (164) disposed therein, defining an inner (166) and outer (168) lips. Albertson also discloses a relief feature (180) on the outer surface of the main body (140). The relief feature includes a channel (shown in figure 6) in the outer surface and extends from the first radial surface to a recess (end portion of 180, with the angled bottom surface, leftmost portion of the channel in figure 6) disposed in the outer lip of the main body. A ridge (170) separates the recess from the second radial face. The recess is adapted to receive a pressurized fluid from the first radial face through the channel, and the outer lip (168) is adapted to flex to allow a flow of pressurized fluid from the first radial face to the second radial face when the pressure of the fluid at the first radial face is greater than the pressure of a fluid at the second radial face (column 11, lines 1-51). Examiner considers the end portion of channel 180 on outer lip 168 as being distinguishable from the channel because it is structurally different from the rest of the channel in that the depth is not constant. This is the portion the examiner considers to be the recess. Albertson fails to disclose the channel to be circular.

13. Oliver teaches a cup (36) with a plurality of recesses (46). The recesses are circular (in cross section). Making a recess circular, as opposed to square or rectangular, reduces stress concentration associated with angled corners. This improves durability and service life of the part. Therefore, it would have been obvious to one having ordinary skill in the art at the time the

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invention was made to modify Albertson, by implementing circular recesses, thus improving durability and service life.

14. With respect to claims 4-6, Albertson discloses a second channel (184, bottom of 140 in figures 5 and 7) extending along the first radial face and connecting with the channel in the outer surface. There is a plurality of relief features (180, figure 6), and the main body (140) has a substantially circular shape.

15. With respect to claim 7, Albertson discloses a housing (14), a cylinder rod (26), a seal (140) having a main body including inner and outer surfaces, first and second radial faces, and a groove, as discussed in the rejection of claim 1. The groove defines inner and (166) and outer lips (168), the inner lip engaging the cylinder rod. Albertson also discloses a relief feature (180) as discussed above, including a channel, a recess, and a ridge. Albertson fails to disclose the recess to be circular.

16. Oliver teaches a cup (36) with a plurality of recesses (46). The recesses are circular (in cross section). Making a recess circular, as opposed to square or rectangular, reduces stress concentration associated with angled corners. This improves durability and service life of the part. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Albertson, by implementing circular recesses, thus improving durability and service life.

17. With respect to claim 8, Albertson discloses a second seal (40) engaging the cylinder (26) between the inner lip of the first seal and a chamber, and a third seal (142) engaging the cylinder at a location where the first and second seal engage a surface of the cylinder between the chamber and the third seal.

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18. With respect to claim 9, Albertson discloses a first annular groove (202b) receiving the first seal (140), a second annular groove (202a) receiving the second seal (40), and a third groove (202c) receiving the third seal (142).

19. With respect to claims 10 and 12, Albertson discloses the relief feature (180) to include a channel (182) formed in the outer surface extending from the first radial face to a recess, and a second channel (184) extending along the first radial face.

20. With respect to claims 13 and 14, Albertson discloses a plurality of relief features (180, figure 6) and the main body has a circular shape.

21. With respect to claims 15 and 16, Albertson discloses the second seal to be a buffer seal ("buffer ring 40", column 11, line 68) and the third seal is a wiper seal ("wiper 142" column 11, line 63).

Response to Arguments

22. Applicant's arguments filed September 3, 2003, have been fully considered but they are not persuasive. Applicant argues that Oliver does not teach a seal having a relief feature as recited in claims 1 and 7, and Oliver teaches away from a combination with Albertson. Examiner respectfully disagrees.

23. Examiner cites Oliver only for the teaching of a circular recess, rather than a square recess. Whether or not Oliver teaches a relief feature is not an issue, because Albertson discloses a relief feature. Additionally, because the examiner is citing Oliver only for the teaching of a circular recess, Oliver does not teach away from making the combination. Oliver is not being

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implemented because of its collapsible feature nor would modifying the recesses of Albertson to be circular make the seal of Albertson collapsible, as suggested by applicant.

Conclusion

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J Kyle whose telephone number is 703-305-3614. The examiner can normally be reached on Monday - Friday, 8:30 am - 5:00 pm.

25. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703-308-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9326.

26. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.

mk


Anthony Knight
Supervisory Patent Examiner
Technology Center 3600